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Date:

2 May 2003

To:

Examiner Gina C. Yu

US Patent and Trademark Office

Tel. No. 703-308-3951 Fax: 703-308-4242

Subject:

USSN 09/756,925

Our Ref.: 102790-43

From:

Howard C. Lee

Comments:

Filing of: response to Office Action dated 9 April 2003, including Petition of Finality of

Requirement of Restriction (3 pgs.), with attached Claims after entry of amendment for

RCE (6 pgs.) and originally filed claims (3 pgs.)

If you have any questions or need further information, please contact us.

You should receive 13 pages including this cover sheet.

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# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

**APPLICANTS** 

QUELLET et al.

出19

SERIAL NO.

09/756,925

FILED

9 January 2001

**FOR** 

COMPOSITE MATERIALS

ART UNIT

1619

EXAMINER

Gina C. Yu

2 May 2003

ATTN: Mr. John Doll (Group Director 1610/1630)

Hon. Commissioner of Patents P.O. Box 1450 Alexandria, VA 22313-1450

## PETITION OF FINALITY OF REQUIREMENT OF RESTRICTION UNDER 37 CFR § 1.144

SIR:

In response to the finality of the restriction requirement issued by the examiner in her first Office Action on the merits (Paper No. 17, dated 9 April 2003), please accept this petition to reconsider the restriction requirement of Paper No. 14, dated 18 December 2002.

## CONDITIONAL PETITION FOR EXTENSION OF TIME

If entry and consideration of the amendments above requires an extension of time, Applicants respectfully request that this be considered a petition therefor. The Assistant Commissioner is authorized to charge any fee(s) due in this connection to Deposit Account No. 14-1263.

### ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess, to Deposit Account No. 14-1263.

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### REQUEST FOR RECONSIDERATION

#### Background

The office action outstanding (Paper No. 17) is the first action on the merits for the Request for Continued Examination (RCE) filed by the applicants on 9 September 2002 (stamped by the PTO on 17 September 2002) which introduced new claims 28-41. The restriction requirement (Paper No. 14) issued by the examiner separated the claims into two Groups:

Group 1 -

Claims 2-10 and 28-41 (drawn to compositions; Class 424 and/or 426)

Group II -

Claims 11-27 (drawn to method of making; Class 427)

The claims of Group I was elected with traverse by the applicants.

Prior to filing the RCE, the application as filed received a first office action on the merits for claims 1-27 and a final rejection for claims 2-27 (claim 1 had been cancelled and claim 2 made the new independent claim). No restriction requirement was made for the claims in the application as filed.

#### Reasons Why Restriction Is Improper

Even if it were to be conceded that composition claims and method of making claims are patentably distinct inventions, a restriction requirement must indicate why the inclusion of multiple invention represents a burden to the office (see MPEP 803 - "If the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even thought it includes claims to independent or distinct inventions.")

A copy of the originally filed claims (claims 1-27) and the claims pending after the amendment filed with the RCE, i.e. claims 2-41 \* are attached to this petition. As can be seen by comparing the claims, pending claims 3-10 are similar to claims 3-10 as originally filed (dependencies have been amended) and pending claim 2 actually represents a narrower embodiment of the originally filed claim 1 which received an office action on the merits. Likewise, pending claims 12-24, 26 and 27 are identical to originally filed, claims 12-24, 26 and 27 and pending claims 11 and 25 are narrower embodiments of original claims 11 and 25. This would appear to be *prime facie* evidence that the currently pending claims do not represent a serious burden on the office as asserted by the examiner.

<sup>★</sup> Claim 3 as filed in the amendment has a typo which states 0.04 instead of 0.05 and claim 5 is dependent upon itself. Both of these errors will be corrected with the response to the office action on the merits.

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Please also note that at the very least, it would appear that claims 25-27 should be rejoined with the claims of Group I as they are clearly not directed toward a method of making.

#### Closing

A favorable decision on this petition is respectfully requested. If any further information is needed, please feel free to contact the undersigned at the telephone number below.

Respectfully submitted,

Norris, McLaughlin & Marcus, P.A.

Howard C. Lee

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### CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that the foregoing Petition of Finality of Requirement of Restriction (3 pages total) is being facsimile transmitted to the United States Patent and Trademark Office on the date indicated below:

Date: 2 May 2003

### Claims aft rentry of amendment for RCE

#### Claim 1 (cancelled)

#### Claim 2 (previously amended)

 A composite material comprising a thermoplastic hydrophilic matrix having dispersed therein droplets of a hydrophobic active ingredient, said droplets having a droplet size in the range of 0.01-2 microns.

### Claim 3 (previously amended)

A composite material according to claim 2 wherein the droplets have a droplet size of between 0.05 µm and 1 µm.

### Claim 4 (previously amended)

 A composite material according to claim 2 wherein the load of active ingredient in the composite material is between 1 to 50% w/w.

#### Claim 5 (previously amended)

5. A composite material according to claim 5 wherein the load of the active ingredient in the composite material is between 5 to 15% w/w.

### Claim 6 (previously amended)

6. A composite material according to claim 2 wherein the active ingredient is selected from the group consisting of a flavor compound, an extract, a precursor or a composition containing a flavor compound, and mixtures thereof.

### Claim 7 (previously amended)

7. A composite material according to claim 2 wherein the active ingredient is selected from the group consisting of a fragrance, a fragrance precursor, an odor masking agent, and mixtures thereof.

### Claim 8 (previously amended)

 A composite material according to claim 2 wherein the active ingredient is a compound with biological activity.

### Claim 9 (previously amended)

9. A composite material according to claim 8 wherein the compound with biological activity is selected from the group consisting of a pharmaceutically active substance, an insect repellent, a bactericide, a fungicide, an acaricide and mixtures thereof.

#### Claim 10 (previously amended)

10. A composite material according to claim 2 further comprising a second active ingredient dispersed in the emulsion.

### Claim 11 (previously amended)

- 11. A method for preparing a composite material comprising:
  - (a) mixing a liquid active ingredient in a oil-in-water emulsion with a matrix premix comprising a thermoplastic hydrophilic polymer, and
  - (b) extruding the mixture (a) to form a composite material characterized in that the composite material comprises a thermoplastic hydrophilic matrix and a hydrophobic active ingredient dispersed as droplets in the said matrix said droplets having a droplet size of between 0.01 μm to 2 μm in the matrix.

#### Claim 12 (original)

12. A method according to claim 11 further comprising introducing the mixture of (a) into an extruder before extrusion.

#### Claim 13 (original)

13. A method according to claim 11 further comprising introducing the oil-in-water emulsion into a barrel of an extruder, which barrel contains the matrix premix, and mixing the emulsion droplets with the matrix premix.

#### Claim 14 (original)

14. A method according to claim 11 wherein a polymeric fraction comprises 50% w/w to 100% w/w of the matrix premix.

#### Claim 15 (original)

15. A method according to claim 11 wherein the oil-in-water emulsion contains 5 to 80% w/w active ingredients, 10 to 90% w/w water, 0.5 to 10% w/w emulsifier, and 0 to 10% w/w additives.

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### Claim 16 (original)

16. A method according to claim 11 wherein the oil-in-water emulsion contains 30 to 60% w/w active ingredients, 15 to 40% w/w water, 0.5 to 10% w/w emulsifier, and 0 to 10% w/w additives.

### Claim 17 (original)

17. A method according to claim 11 wherein the matrix premix comprises a hydrophilic thermoplastic polymer and an additive.

#### Claim 18 (original)

A method according to claim 17 wherein the hydrophilic thermoplastic polymer is selected from the group consisting of native starch, modified starch, thermoplastic starch, polyvinyl alcohol, its copolymers and polyesters.

#### Claim 19 (original)

19. A method according to claim 17 wherein the additive is selected from the group consisting of crosslinking agents, plasticizers, antiplasticizers, fillers, and mixtures thereof.

### Claim 20 (original)

20. A method according to claim 11 wherein the oil-in-water emulsion further comprises an emulsifier and a surfactant.

#### Claim 21 (original)

21. A method according to claim 20 wherein the emulsifier is selected from the group consisting of modified starch, a sucrose or sorbitol ester of a fatty acid, a carbohydrate, a phospholipids, and mixtures thereof.

#### Claim 22 (original)

A method according to claim 20 wherein the surfactant is selected from the group consisting of monomolecular surfactant, a polymeric surfactant, and a colloid stabilizer.

#### Claim 23 (original)

A method according to claim 20 further comprising a co-surfactant.

#### Claim 24 (original)

24. A method according to claim 23 wherein the co-surfactant is a primary alcohol or a short chain alkylsulfate.

### Claim 25 (previously amended)

25. A protective or controlled release system for an active ingredient comprising a composite material comprising a thermoplastic hydrophilic matrix and a hydrophobic active ingredient dispersed as droplets within the thermoplastic hydrophilic matrix having a droplet size in the range of 0.01 - 2 microns.

#### Claim 26 (original)

A protective or controlled release system according to claim 25 wherein the active ingredient is a flavor or a fragrance.

#### Claim 27 (original)

27. A protective or controlled release system according to claim 26 wherein the composite material comprising a fragrance as the active ingredient is incorporated into a consumer product selected from the group consisting of a dry detergent, a household product, and a cosmetic.

### Claim 28 (previously added)

- 28. A composite material comprising thermoplastic hydrophilic matrix and a hydrophobic active ingredient dispersed as droplets in the said thermoplastic hydrophobic matrix said droplets having a droplet size in the range of 0.01 2 microns produced by a process which includes the steps of:
  - (a) forming a mixture of a hydrophobic liquid active ingredient in a oil-in-water emulsion with a matrix premix comprising a thermoplastic hydrophilic polymer; and
  - (b) extruding the mixture of (a) to form a composite material.

#### Claim 29 (previously added)

29. The composite material according to claim 28 wherein the process including the further step of: introducing the mixture of (a) into an extruder before extrusion.

#### Claim 30 (previously added)

30. The composite material according to claim 28 wherein the process includes the further step of:
introducing an oil-in-water emulsion containing the hydrophobic active ingredient into a
barrel of an extruder, which barrel contains the matrix premix, and mixing the oil-in-water
emulsion with the matrix premix.

#### Claim 31 (previously added)

31. The composite material according to claim 28 wherein the process includes the further step of:

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forming a mixture of a hydrophobic active ingredient in an oil-in-water emulsion, with a matrix premix comprising a thermoplastic hydrophilic polymer wherein the polymeric fraction comprises 50% w/w to 100% w/w of the matrix premix.

### Claim 32 (previously added)

The composite material according to claim 28 wherein the process includes the further step of: 32. forming a mixture of a hydrophobic active ingredient in an oil-in-water emulsion, with a matrix premix comprising a thermoplastic hydrophilic polymer wherein the oil-in-water emulsion contains 5 to 80% w/w active ingredients, 10 to 90% w/w water, 0.5 to 10% w/w emulsifier, and 0 to 10% w/w additives.

### Claim 33 (previously added)

The composite material according to claim 28 wherein the process includes the further step of: 33. forming a mixture of a hydrophobic active ingredient in an oil-in-water emulsion, with a matrix premix comprising a thermoplastic hydrophilic polymer wherein the oil-in-water emulsion contains 30 to 60% w/w active ingredients, 15 to 40% w/w water, 0.5 to 10% w/w emulsifier, and 0 to 10% w/w additives.

#### Claim 34 (previously added)

The composite material according to claim 28 wherein the process includes the further step of: 34. forming a mixture of a hydrophobic active ingredient in an oil-in-water emulsion with a matrix premix comprising a thermoplastic hydrophilic polymer wherein the matrix premix comprises a hydrophilic thermoplastic polymer and an additive.

### Claim 35 (previously added)

The composite material according to claim 28 wherein the process includes the further step of: 35. forming a mixture of a hydrophobic active ingredient in an oil-in-water emulsion with a matrix premix comprising a thermoplastic hydrophilic polymer wherein the hydrophilic thermoplastic polymer is selected from the group consisting of native starch, modified starch, thermoplastic starch, polyvinyl alcohol, its copolymers, and polyesters.

#### Claim 36 (previously added)

The composite material according to claim 34 wherein the additive is selected from the group 36. consisting of cross linking agents, plasticizers, antiplasticizers, fillers, and mixtures thereof.

### Claim 37 (previously added)

The composite material according to claim 28 wherein the process includes the further step of: 37.

forming a mixture of a hydrophobic active ingredient in an oil-in-water emulsion with a matrix premix comprising a thermoplastic hydrophilic polymer wherein the oil-in-water emulsion further comprises an emulsifier and a surfactant.

#### Claim 38 (previously added)

The composite material according to claim 37 wherein the emulsifier is selected from the group 38. consisting of a modified starch, a sucrose or sorbitol ester of a fatty acid, a carbohydrate, a phospholipid, and mixtures thereof.

#### Claim 39 (previously added)

The composite material according to claim 37 wherein the surfactant is selected from the group 39. consisting of a monomolecular surfactant, a polymeric surfactant, and a colloid stabilizer.

### Claim 40 (previously added)

The composite material according to claim 39 wherein there is also present a co-surfactant. 40.

### Claim 41 (previously added)

The composite material according to claim 40 wherein the co-surfactant is a primary alcohol or a 41. short chain alkylsulfate.